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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,749	02/09/2004	Ray J. Hutchinson	2400-756D	6142
27820	7590	05/23/2005	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			LARKIN, DANIEL SEAN	
P.O. BOX 1287			ART UNIT	
CARY, NC 27512			PAPER NUMBER	
			2856	

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/774,749

Applicant(s)

HUTCHINSON ET AL.

Examiner

Daniel S. Larkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 18-21 is/are allowed.
- 6) ☒ Claim(s) 8-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Species I, claims 1-21, in the reply filed on 21 April 2005 is acknowledged.

2. Acknowledgement is also made of applicants' desire to cancel claims 22-33 in the reply filed 21 April 2005.

***Information Disclosure Statement***

3. The second information disclosure statement (IDS) filed 09 June 2004 and the information disclosure statement (IDS) filed 14 June 2004 have both been considered by the examiner; however, citations 1-35 from each IDS have been crossed out because they are duplicates of citations 1-35 filed in the first IDS submitted 09 June 2004. Additionally, citations 36 and 37 on the IDS submitted 14 June 2004 IDS have been crossed out because they are duplicates of the citations filed on the IDS submitted on 13 May 2004. Furthermore, citations 12, 21, and 22 on the first IDS submitted 09 June 2004 have been crossed out because they are duplicates of citations 10, 16, and 7, respectively, of the same IDS.

***Drawings***

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the “communicative coupling between the differential pressure indicator 98 and the tank monitor 62” as described in the specification on page 12, paragraph [0051], lines 3-5. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

5. The drawings are objected to because reference numeral “30”, as shown in the top inset circle of Figures 1 and 2, should be corrected to read -- 32 --.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following limitations must be shown or the feature(s) canceled from the claim(s):

The drawing figures, specifically with reference to Figure 16, fail to show the placement of a venturi in power head to create the vacuum in the siphon tube, as recited in claim 2 and in combination with all of the limitations of the base claim.

The drawing figures, specifically with reference to Figure 16, fail to show the coupling of a pressure sensor to vacuum tubing, as recited in claim 5 and in combination with all of the limitations of the base claim.

The drawing figures, specifically with reference to Figure 16, fail to show the coupling of a sensing unit controller to the pressure sensor, as recited in claim 6 and in combination with all of the limitations of the base claim.

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The drawing figures, specifically with reference to Figure 16, fail to show the coupling of a liquid detection sensor, i.e. a float, to the interior space, as recited in claims 16 and 17 and in combination with all of the limitations of the base claim and any intervening claims.

The drawing figures, specifically with reference to Figure 16, fail to show the placement of a check valve in the vacuum tubing, as recited in claims 19 and 20 and in combination with all of the limitations of the base claim and any intervening claims. No new matter should be entered.

7. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The disclosure is objected to because of the following informalities:

Page 1, paragraph [0002], line 3: The phrase -- , now U.S. Patent No. 6,834,534, -- should be inserted after the date "2003".

Page 17, paragraph [0062], line 6: The phrase -- (step 132) -- should be inserted after the numeral "30".

Page 25, paragraph [0083], lines 2 and 4: The term "o-ring" should be corrected to read -- O-ring --. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 8-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claims 8, 10, 11, and 13: The term "catastrophic" is deemed to be a relative term because the claims fail to provide any guidance as to how one should interpret the meaning of catastrophic. One is unclear as to how large a leak is necessary to be labeled as catastrophic.

Re claim 9, claim line 1: Is this "tank monitor" the same tank monitor recited in claims 7 and 8? The specification appears to only disclose a single tank monitor.

Re claim 10, claim line 3: Is this "defined initial threshold vacuum level" the same threshold vacuum level previously recited in claims 7 and 8?

Re claim 15: The term "precision" is deemed to be a relative term because the claims fail to provide any guidance as to how one should interpret the meaning of precision. One is unclear as to how small or large a leak is required to be defined as a precision leak.

***Allowable Subject Matter***

12. The following is a statement of reasons for the indication of allowable subject matter:

Prior art was not relied upon to reject claims 1-21 because the prior art fails to teach and/or make obvious a system for detecting a leak comprising: a pressure sensor coupled to the interior space of a casing to measure a vacuum level in the interior space, the casing surrounding a power head of a submersible turbine pump in combination with all of the remaining limitations of the claim.

13. Claims 1-7 and 18-21 are allowed.

14. Claims 8-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art to JP 2000-274378 (Ochiai) discloses a diagnostic device for hydraulic rotating machine comprising a pressure sensor for detecting the internal pressure of a drain oil chamber.




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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin  
AU 2856  
19 May 2005



**DANIEL S. LARKIN**  
**PRIMARY EXAMINER**